

notice in a well-printed Catalogue. This is worthy of the attention and well fitted to the use of geologists, whether working earnestly in the details of the science or taking up the pleasures of "collecting" at a given locality or in a given formation.

The abundant fruits of research among the British Jurassic Gasteropoda during the last forty years, largely due to the energy and acumen of W. H. Hudleston, and incorporated in this work, thus occupy 120 pages in the new Catalogue, whilst 55 pages of 'Morris's Catalogue' served for all the known fossil Gasteropoda of Britain; the very limited and condensed references, however, in the latter somewhat affect the comparison.

It is to be hoped that the scientific public will liberally support the publication of such excellent catalogues of the British Fossils as the book under notice and Woodward and Sherborn's 'Catalogue of British Vertebrates,' brought out by the same publisher, and reviewed in the *Ann. & Mag. Nat. Hist.* ser. 6, vol. v., 1890, pp. 337 &c. Such trustworthy exegetical catalogues of fossils as these are much wanted. They clear the way for students and others; they do much for the avoidance of error; and they save loss of time and patience in looking for the history of known species and for the probable relationships of newly-found fossils.

The Jurassic Rocks of the Neighbourhood of Cambridge. By the late THOMAS ROBERTS, M.A., F.G.S. Svo. Pp. vii and 96. C. J. Clay and Sons. London, 1892.

THIS memoir was the "Sedgwick Prize Essay" for 1886. The Author, who had collected and discussed so many useful points in the distribution and natural history of these Jurassic strata, unfortunately died, at an early age, whilst adding new facts and perfecting the views which he had advanced with care and perspicuity. Lamenting his death and desirous that his good work should not be lost sight of, some of his colleagues in the Woodwardian Museum and other friends have put together the notes that he left and have brought out this Prize Essay, so enriched, as a lasting memorial of a geologist whom his many friends highly respected and wish to honour.

The Oolites of Cambridgeshire and northwards differ from those of the south in several particulars, on account of the two series having been laid down on and against a ridge or ridges of Palæozoic rocks, making shoals in the sea of the Jurassic period, and trending north-easterly and then northerly. Hence not only does the strike of the Oolitic strata vary in the East-Anglian district, but their constituent deposits vary in character, both according to the local depths of the sea and the kinds of material supplied by the organic remains, and by the sediments brought from the shores. Thus "throughout the greater part of the period the deposits were laid

down under locally shifting geographical conditions, so that the district was from time to time divided into different and changing hydrographical areas, the sediments varying as barriers disappeared or were introduced, and the forms of life more or less readily yielding to the influence of external circumstances."

Moreover the higher members of the Oolitic group, seen in the south-west, are wanting in East Anglia, either not having reached so far as deposits along the old sea-bottom or having been removed by denudation.

Particular points in the inquiry carried out by Mr. Roberts were as to the exact geological value of the several bands in the Kimeridge and Oxford Clays, and as to strata representing the Corallian series of neighbouring districts. Here the careful collection and exact determination of the fossils were most important; and chiefly by means thereof the author came to the conclusion that the Oolites of the district under consideration might be tabulated as follows:—

1. Kimeridge Clay { Upper.
Lower.
2. Amptill Clay { Upware Section.
Coral-rag.
Coralline Oolite.
3. Lower Calcareous Grit. (The Elsworth and St.-Ives Rocks.)
4. Oxford Clay.

This last great formation is here represented by three palæontological zones:—

1. Zone of *Ammonites perarmatus* (rare), *A. crenatus*, *A. oculus*, and the *Cordati* group of *Ammonites* of the St.-Ives clay-pit.
2. Zone of *Waldheimia impressa*, at the base of the St.-Ives clay-pit.
3. Zone of *Ammonites Duncani* and *A. Jason* (the *Ornati* group of *Ammonites*) of St. Neots. [Lowest zone.]

The valuable, because trustworthy, lists of fossils from the several bands of clay and stone and the full stratigraphical description of other strata,—the careful references to foregoing observations and descriptions,—and the correlation of the Oolites of Cambridgeshire with those of other English districts (pp. 77-86) and with foreign equivalents (pp. 87-94), render this Memoir of very great value to all concerned with the physical geography, the geology, and the palæontology of this classic ground and of the corresponding regions in France and Germany.